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10/699,262	10/31/2003	Daniel C. Conrad	US19984054-5	2036

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EXAMINER

WEBB, GREGORY E

ART UNIT	PAPER NUMBER
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1751

DATE MAILED: 09/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/699,262

Applicant(s)

CONRAD ET AL.

Examiner

Gregory E. Webb

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date NO IDS WAS FILED.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Kasprzak (US4685930).

Concerning the cyclic siloxane, Kasprzak teaches the following:

Compared with the linear polydimethylsiloxanes the cyclic siloxanes employed according to this invention are relatively volatile materials having boiling points below about 250.degree. C. at 760 mm Hg. A single cyclic siloxane may be used in the liquid cleaning composition or any mixture of two or more of the cyclic siloxanes may be used. Specifically preferred cyclic siloxanes for use in this invention are octamethylcyclotetrasiloxane, decamethylcyclopentasiloxane, and dodecamethylcyclohexasiloxane. It should be understood that useful cyclic siloxane mixtures may contain, in addition to the preferred cyclic siloxanes, minor amounts of other cyclic siloxanes including hexamethylcyclotrisiloxane or higher cyclics such as tetradecamethylcycloheptasiloxane. Generally the amount of these other cyclic siloxanes in useful cyclic siloxane mixtures will be less than

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about 10 percent based on the total weight of the mixture.(see col. 3, lines 22-40)

Concerning the preferred solvents having the properties of being substantially non-reactive, non-aqueous, non-oleophilic, and apolar, Kasprzak teaches the following:

The cyclic siloxane fluids tested were (A) octamethylcyclotetrasiloxane, (B) decamethylcyclopentasiloxane, (C) a cyclic siloxane mixture of about 91 percent by weight octamethylcyclotetrasiloxane and about 8 percent by weight decamethylcyclopentasiloxane, and (D) a cyclic siloxane mixture of about 1.3 percent by weight octamethylcyclotetrasiloxane, about 69.3 percent by weight decamethylcyclopentasiloxane and about 29.1 percent by weight dodecamethylcyclohexasiloxane. For comparison, hexamethyldisiloxane, mineral spirits, tetrachloroethylene, isopropyl alcohol, and xylene were also used to clean the stains.(see example 1)

Concerning the builders, Kasprzak teaches the following:

Other adjuvants may be included in the liquid cleaning compositions of this invention such as conventional cleaning solvents, absorbent solid particulate materials, synthetic builders, water soluble organic detergent compounds, and cationic antistatic substances.(see col. 3, lines 48-53)

Concerning the emulsion, Kasprzak teaches the following:

An all purpose cleaner composition containing a mixture of surfactants, isopropyl alcohol, and a silicone defoaming agent is disclosed in U.S. Pat. No. 4,311,608. The silicone defoaming agent is an oil-in-water emulsion of dimethylsiloxane polymer.(see col. 2, lines 50-55)

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Claims 1-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Sanders, Jr. (US4247330).

Concerning the cyclic siloxane, Sanders, Jr. teaches the following:

The ratio of aminofunctional silicone fluid to cyclic siloxane present in the mixture of silicone compounds is not critical and may range from about 1:1 to 1:4 as well as 4:1, preferably 1:1.5 on a weight basis.(see col. 6, lines 31-34)

Concerning the preferred solvents having the properties of being substantially non-reactive, non-aqueous, non-oleophilic, and apolar, Sanders, Jr. teaches the following:

Examples of suitable cyclic siloxanes which may be emulsified with the aminofunctional silicone fluids are hexamethylcyclotrisiloxane, hexaphenylcyclotrisiloxane,

1,2,3-trimethyl-1,2,3-triphenylcyclotrisiloxane,

1,2,3-trimethyl-1,2,3-trivinylcyclotrisiloxane,

octamethylcyclotetrasiloxane,

1,2,3,4-tetramethyl-1,2,3,4-tetravinylcyclotetrasiloxane,

decamethylcyclopentasiloxane, dodecamethylcyclohexasiloxane,

tetradecamethylcycloheptasiloxane and hexadecamethylcycloctasiloxane.(see col. 5, lines 20-30)

Concerning the builders, Sanders, Jr. teaches the following:

About 16 parts of dicoco dimethyl quaternary ammonium chloride, 75 percent active (available from Armour and Company) are mixed with the resultant

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emulsion. Two parts of the resultant emulsion are mixed with 25 parts of water and applied to a car surface as a rinse. Rapid and excessive water beading is observed. The car surface is still hydrophobic after 5 detergent washings as evidenced by rapid water beading.(see example 1)

Concerning the preferred nonionic surfactants, Sanders, Jr. teaches the following:

The above cationic emulsifiers may be used in combination with nonionic emulsifiers such as polyoxyethylene alkyl phenols, nonylphenoxypoly(ethyleneoxy) ethanols (available from General Aniline and Film Corporation), polyoxyethylene sorbitol hexastearate, polyoxyethylene(2 mol) cetyl ether (available from Imperial Chemical Industries of America), trimethyl nonyl ether of polyethylene glycol, (molecular weight about 626, and containing from 6 to 14 ethylene oxide radicals per molecule, available as TERGITOL TMN-10 from Union Carbide Corporation), polyoxyethylene sorbitol oleate (saponification number 102-108 and hydroxyl number 25-35, available as ATLOX 1087 from Imperial Chemical Industries of America).(see cols. 5-6)

Concerning the emulsion, Sanders, Jr. teaches the following:

It has been found that aqueous emulsions containing aminofunctional silicone fluids can be made storage stable by incorporating cyclic siloxanes in the emulsions. Moreover these emulsions provide an improved hydrophobic and detergent resistance coating to the treated surfaces.(see col. 2, lines 7-12)

Concerning the dispensing chamber, Sanders, Jr. teaches the following:

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An aqueous emulsion containing (1) a mixture of silicone compounds consisting of (a) an aminofunctional silicone fluid and (b) a cyclic siloxane, (2) an aliphatic alcohol having from 1 to 4 carbon atoms, (3) sufficient carboxylic acid to neutralize the aminofunctional group and (4) cationic emulsifying agents, if desired. These aqueous emulsions are storage stable and are suitable for dispensing in automatic car washes to impart a detergent resistant protective coating on hard surfaces.(see abstract)

Claims 1-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Madore (US5091105).

Concerning the cyclic siloxane, Madore teaches the following:

In the present invention, various categories of silicones have been referred to hereinabove such as cyclic siloxanes, low viscosity siloxanes, high viscosity siloxane fluids, siloxane gums, and branched siloxanes. These silicones are each clearly distinguishable materials one from the other. For example, a simple test exists which is based on the varying solubilities of these materials in isopropanol and toluene. Thus, cyclic siloxanes are soluble in both isopropanol and toluene. Low viscosity siloxanes, that is siloxanes having a viscosity less than about one thousand centistokes, are also soluble in toluene but not in isopropanol. Similarly, siloxane gums are insoluble in isopropanol but soluble in toluene. The branched siloxanes are neither soluble in isopropanol nor

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toluene.(see col. 10, lines 23-38)

Concerning the preferred solvents having the properties of being substantially non-reactive, non-aqueous, non-oleophilic, and apolar, Madore teaches the following:

In some of the more preferred embodiments of the present invention, the volatile cyclic silicone constitutes about 70-95 percent by weight based on the total weight of the silicone mixture. The volatile cyclic silicone must be sufficiently volatile to evaporate at room temperature, and exemplary materials are octamethylcyclotetrasiloxane, decamethylcyclopentasiloxane, or mixtures thereof.(see cols. 2-3)

Concerning the builders, Madore teaches the following:

While the liquid detergent of the present invention may contain many of the commonly included ingredients such as surfactants, builders, enzymes and enzyme stabilizers, pH modifiers, bleach activators and bleaches, antifoams, anti-redeposition agents, chelants, soil release polymers, dye transfer protectants, zeolite dispersants, water softeners, perfumes, anti-oxidants, and fluorescent brighteners, the essential ingredients for purposes of the present invention are an anionic surfactant, a nonionic surfactant, a carrier fluid, and the softening agent.(see col. 3, lines 28-38)

Concerning the emulsion and the cooling step, Madore teaches the following:

88 grams of a 27% water solution of tallow trimethyl ammonium chloride was added to 535 grams of water until a uniform mixture was obtained. To this mixture was added 350 grams of octamethylcyclotetrasiloxane and 6.5 grams

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of methyl trimethoxysilane followed by vigorous stirring. The resulting emulsion was passed twice through a homogenizer set at 7500 psig. The emulsion was then made alkaline by the addition of 1 gram of a 50% sodium hydroxide solution. The emulsion was heated at 85 degrees Centigrade for 9 hours. After cooling to 40 degrees Centigrade, 1.5 grams of 85% phosphoric acid was added and stirred for 5 minutes followed by the addition of 17 grams of MAKON.RTM. 10, a nonyl phenoxy-polyethylene oxide surfactant. The emulsion was allowed to stir for 1 hour at 40 degrees Centigrade. Upon cooling to room temperature 0.5 grams of KATHON.RTM. CG/ICP, a preservative, was added.(see example IV)

Claims 1-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Donkers (US4961753).

Concerning the cyclic siloxane and the preferred solvents having the properties of being substantially non-reactive, non-aqueous, non-oleophilic, and apolar, Donkers teaches the following:

A nonionic siloxane emulsion ND was prepared and incorporated into a fabric conditioning composition as described in Example 1, except that the mixture of cyclic siloxanes was replaced with the same weight of a mixture of 77% of decamethylcyclopentasiloxane and 16.5% of dodecamethylcyclohexasiloxane and small percentages of cyclic siloxanes having up to 10 silicon atoms.(see example 2)

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Concerning the builders, Donkers teaches the following:

The aqueous compositions may contain in addition to (A), (B) and water other, optional, ingredients for example perfumes, viscosity control agents, optical brighteners, colorants, opacifying agents, soil release agents, biocides and fabric treating agents such as the fatty acid esters of monohydric and polyhydric alcohols. Such additional ingredients may be added to the preformed aqueous composition comprising (A) and (B) or may be incorporated in admixture with (A) and (B). (see col. 4, lines 55-63)

Concerning the preferred cationic surfactant, Donkers teaches the following:

(a) Alkylmethyl quaternary ammonium compounds having either one C.sub.18 -C.sub.24 alkyl chain or two C.sub.12 -C.sub.30 alkyl chains, the long chain alkyl groups being most commonly those derived from hydrogenated tallow. Examples of such compounds are ditallowdimethyl ammonium chloride, ditallowdimethyl ammonium methyl sulphate, tallowtrimethyl ammonium chloride, dieicosyldimethyl ammonium chloride, tallowdimethyl(3-tallowalkoxypropyl) ammonium chloride, ditetradecyldimethyl ammonium chloride, didodecyldiethyl ammonium acetate and tallowtrimethyl ammonium acetate. (b) Amido alkoxylated quaternary ammonium compounds. Quaternary compounds of this type can be prepared from fatty acids or triglycerides and an amine e.g. diethylene triamine. The product is then alkoxylated with ethylene oxide or propylene oxide and quaternised with dimethyl sulphate. Compounds of type (ii) can be

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represented by the formula

##STR1##

M represents a fatty alkyl group typically C.sub.12 to C.sub.20, X

represents for example Cl, Br or the methyl sulphate group, y is 2 or 3

and c is an integer.(see cols. 1-2)

Claims 1-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Kemerer (US4708807).

Concerning the cyclic siloxane, Kemerer teaches the following:

The method of this invention can be used to remove a wide variety of soils and stains. It is particularly effective in removing oil and grease spots or stains. One special advantage of employing the cyclic siloxanes as the cleaning solvent (or part of the cleaning solvent) is that the formation of a secondary stain ring is greatly reduced or eliminated entirely.

Another advantage is that the cyclic siloxanes are essentially non-toxic and non-harmful in the environment.(see col. 6, lines 43-51)

Concerning the preferred solvents having the properties of being substantially non-reactive, non-aqueous, non-oleophilic, and apolar, Kemerer teaches the following:

(e) up to about 95.5 parts by weight of at least one cyclic-dimethyl siloxane selected from the group consisting of octamethylcyclotetrasiloxane, decamethylcyclopentasiloxane and dodecamethylcyclohexasiloxane; and (see claim 1)

Concerning the builders, Kemerer teaches the following:

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The compositions of this invention may further contain other adjuvants commonly employed in the cleaning and waterproofing arts. Examples of such additional components include, but are not limited to, synthetic builders, antistatic agents and absorbent solid particulate materials. Examples of absorbent solid materials include silica, talc, diatomaceous earth, kaolinite, starch, nut shell flour, ground rice hulls and urea-formaldehyde polymer particles. These materials, when present, constitute from 5 to 40% by weight of the solvent content of the cleaning and waterproofing composition.(see cols. 5-6)

Claims 1-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Graiver (US4999398).

Concerning the cyclic siloxane, Graiver teaches the following:

Polydiorganosiloxane precursors which can be used in the practice of the invention include the cyclic siloxanes which are relatively insoluble in water and which can be polymerized using emulsion polymerization techniques. The preferred cyclic siloxanes are of the general formula:

##STR2##

where R and R' denote methyl, ethyl, propyl, vinyl, allyl, or phenyl; n is 3, 4, 5, or 6. The cyclic precursors can be pure species such as octamethylcyclotetrasiloxane, hexamethylcyclotrisiloxane, decamethylcyclopentasiloxane, tetramethyltetravinylcyclotetrasiloxane,

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tetramethyltetraphenylcyclotetrasiloxane, and the like. Mixtures of the species can also be used. For instance, a mixture of cyclopolydimethylsiloxanes with 3, 4, and 5 siloxane units could be used.(see col. 5, lines 19-40)

Concerning the preferred solvents having the properties of being substantially non-reactive, non-aqueous, non-oleophilic, and apolar, Graiver teaches the following:

This example illustrates the invention method using DBSA as a surfactant, and as a polymerization catalyst for octamethylcyclotetrasiloxane.(see example 3)

Concerning the builders and the hydrophilic-lipophilic balance, Graiver teaches the following:

Anionic, cationic, or nonionic surfactants can be used to stabilize the precursor emulsion and the microemulsion produced by the invention.

Nonionic surfactants with hydrophilic-lipophilic balances (HLB) of between about 10 and about 20 are preferred in stabilizing the emulsions of polydiorganosiloxane precursor since the nonionic surfactants are not polymerization catalysts. The use of nonionic surfactants with HLBs less than 10 results in hazy microemulsions due to the limited solubility of the surfactant, whereas, nonionic surfactants with higher HLBs give larger average droplet size microemulsions.(see col. 4, lines 23-34)

Concerning the preferred cationic surfactant, Graiver teaches the following:

Preferred cationic surfactants used in the process are those cationic surfactants known in the art to be useful in emulsion polymerization of polysiloxanes, and include tetra-alkylsubstituted ammonium chlorides with

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1 or 2 alkyl chains between 6 and 18 carbon atoms in length. The cationic surfactants taught by Hyde, U.S. Pat. No. 2,891,920, are incorporated by reference.(see col. 6, lines 35-41)

Concerning the preferred nonionic surfactants, Graiver teaches the following:

Adding the surfactant octylphenoxypolyethoxy ethanol (40 EO) (Triton.RTM. X405, to the unneutralized final sample produced microemulsions with an average droplet size of 0.033 micron.(see example 9)

Concerning the emulsion, Graiver teaches the following:

It has been found that adding a standard polydiorganosiloxane precursor emulsion at a specifically defined rate to a polymerization medium comprised of an effective amount of polymerization catalyst, water, and surfactant while mixing surprisingly results in the formation of a microemulsion of polydiorganosiloxane which is stable with time and which has average droplet sizes less than 0.15 micron. Microemulsion droplet sizes are variously defined in the chemical art with an upper limit on the droplet size typically being placed somewhere between 0.10 and 0.15 micron to distinguish microemulsions from opaque standard emulsions. In general, microemulsions can also be defined by their appearance: microemulsions are transparent, or translucent, and do not display the opalescence of standard emulsions. While microemulsions with average droplet sizes between 0.10 and 0.15 micron display the properties of microemulsions, microemulsions with average droplet sizes less than 0.10 micron are

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preferred for their even greater clarity and stability.(see cols. 4-5)

Claims 1-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Ona (US4388437).

Concerning the cyclic siloxane, Ona teaches the following:

The organopolysiloxane of component (A) can be easily prepared by a conventional method. As shown in U.S. Pat. No. 4,247,592, the synthetic methods include the addition reaction of an organohydrogenpolysiloxane with $\text{CH}_2\text{--C(CH}_3)_2\text{--CH}_2\text{(NHCH}_2\text{CH}_2)_d\text{NHR}_2$; a condensation reaction of $\text{H}_2\text{NCH}_2\text{CH}_2\text{NH}_2$ with an organopolysiloxane containing a $\text{--SiCH}_2\text{CH}_2\text{CH}_2\text{Cl}$ group; and hydrolysis of a reaction product of a cyclic siloxane or α,ω -dihydroxyorganopolysiloxane with R(Z)SiR_2 ($\text{NHCH}_2\text{CH}_2)_d\text{NHR}_2$ wherein Z is a hydrolyzable group and R, R_1 , R_2 , and d are defined previously, to which R_3SiZ or R_2XSiZ as an endblocking group and a trifunctional silane of R_3SiZ or XSiZ can be added. Preparation of the organopolysiloxane (A) is, however, not restricted to these methods. The organopolysiloxane in this invention may contain unreacted chemicals as impurities. More than one kind of organopolysiloxane with different molecular weight and different number and kinds of X can also be present, as is well known.(see col. 2, lines 49-68)

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Concerning the preferred solvents having the properties of being substantially non-reactive, non-aqueous, non-oleophilic, and apolar, Ona teaches the following:

To a mixture of octamethylcyclotetrasiloxane (94.25 parts) and CH.sub.3 (C.sub.2 H.sub.5 O).sub.2 Si(CH.sub.2).sub.4 NH.sub.2 (5.24 parts) were added hexamethyldisiloxane (0.51 part) and potassium hydroxide (0.02 part). The mixture was heated similarly to Example 1 to yield an aminofunctional organopolysiloxane (VI) with a viscosity of 1,390 centistokes. (see example 5)

Concerning the builders and the emulsion, Ona teaches the following:

Water as component (E) is added to form an emulsion. The quantity of water is sufficient to form an emulsion and is not further restricted.(see col. 4, lines 54-56)

Concerning the hydrophilic-lipophilic balance, Ona teaches the following:

This organopolysiloxane (30 parts) was emulsified with 3 parts of a mixture of three kinds of polyoxyethylene nonphenol ethers having different HLB in the presence of water (67 parts). This mixture of polyoxyethylene nonylphenol ethers consisted of 60% of an ether having an HLB value of 10.5, 20% of an ether having an HLB value of 12.1 and 20% of an ether having an HLB value of 13.7.(see example 1)

Claims 1-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Inada (US5443747).

Concerning the preferred solvents having the properties of being substantially non-reactive, non-aqueous, non-oleophilic, and apolar, Inada teaches the following:

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For use as a dewatering cleaning agent, low molecular weight polyorganosiloxanes having a cyclic structure are preferable from the viewpoint of substituting property with water and penetrability and the like, octamethylcyclotetrasiloxane, decamethylcyclopentasiloxane, and mixtures thereof are more preferable.(see col. 3, lines 55-65)

Concerning the builders, Inada teaches the following:

Moreover, it is understood that mixing of surfactants and hydrophilic solvents with the dewatering cleaning agents of the invention improved the dewatering property, thereby attesting to their industrial applicability.(see col. 15, lines 42-48)

Concerning the filtering, Inada teaches the following:

As described above, the drain lines 4, 3a, 10 of the first, second, and third cleaning vessels 1, 2, and 7, and the dewatering vessel 3 are connected to the cleaning agent recycling mechanism C. The cleaning agent D1 or D2 contained in each cleaning vessel is constantly cleaned by the filters 6 and 12. However, when heavily contaminated, the cleaning agent is introduced to the cleaning agent recycling mechanism C through drain lines 4 and 10 by a conveyer pump 13 for fractional distillation. The cleaning agent D1 deposited in the dewatering vessel 3 is also supplied intermittently to the cleaning agent recycling mechanism C.(see col. 17, lines 21-32)

Claims 1-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaspzak (EP0182583).

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Kaspzak teaches compositions containing octamethylcyclotetrasiloxane (see page 4).

Kaspzak teaches methods of using these compositions (see page 4).

Kaspzak teaches additives including builders, detergents and antistatic agents (see pages 5-6).

Kaspzak teaches cationic surfactants including the quaternary searyltrimethylammonium chloride (see page 7).

Concerning the mechanical action, Kaspzak teaches mechanical action such as scrubbing (see page 8).

Kaspzak teaches a drying and draining step (see page 9).

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory E. Webb whose telephone number is 571-272-1325. The examiner can normally be reached on 9:00-17:30 (m-f).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be 'G. Webb', with a large loop on the left and a wavy line extending to the right.

Gregory E. Webb
Primary Examiner
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gew